Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A ~~replicable genetic package~~ bacteriophage displaying a compound other than a polypeptide expressed by the ~~replicable genetic package~~ bacteriophage, wherein the ~~replicable genetic package~~ bacteriophage comprises a heterologous nucleic acid tag that can be decoded to identify a characteristic of the compound, and the heterologous nucleic acid tag is a nucleic acid segment other than a segment that encodes for a polypeptide displayed on the bacteriophage .

2-3. (cancel)

4. (Withdrawn and currently amended) The ~~replicable genetic package~~ ~~replicable genetic package~~ bacteriophage of claim [[3]] 1, wherein the bacteriophage is a filamentous phage.

5. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim [[3]] 1, wherein the bacteriophage is a non-filamentous phage.

6. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim [[3]] 1, wherein the bacteriophage is an icosahedral phage.

7. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the compound is a small molecule.

8. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the compound comprises a polypeptide linked to a small molecule.

9. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein if the compound is a peptide then the ~~replicable genetic package~~ bacteriophage and the compound are attached by other than a peptide linkage.

10. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the ~~replicable genetic package~~ bacteriophage and compound are joined via a covalent bond formed between an endogenous functional group on the bacteriophage ~~replicable genetic package~~ and a functional group borne by the compound.

11. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the ~~replicable genetic package~~ bacteriophage bears a package linker and the compound is attached to the ~~replicable genetic package~~ bacteriophage by association with the package linker.

12. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the compound bears a compound linker and the compound is attached to the ~~replicable genetic package~~ bacteriophage via the compound linker.

13. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the ~~replicable genetic package~~ bacteriophage bears a package linker and the compound a compound linker and the compound is attached to the ~~replicable genetic package~~ bacteriophage by association of the linkers.

14. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 13, wherein the ~~replicable genetic package~~ bacteriophage and the compound are linked by a non-covalent interaction.

15. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 13, wherein the package linker and compound linker are members of a binding pair.

16. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 15, wherein binding pair members comprise a binding protein and a ligand having specific binding affinity for the binding protein.

17. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 16, wherein the binding protein is an antibody and the ligand is a hapten.

18. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 15, wherein the binding pair members comprise biotin and either avidin, streptavidin or neutravidin.

19. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 15, wherein the binding pair members comprise peptide dimerization domains.

20. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 13, further comprising a bridging linker that effects association of the package linker and the compound linker.

21. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 20, wherein at least one of the linkers is a reversible linker.

22. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the ~~replicable genetic package~~ bacteriophage displays a plurality of compounds.

23. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein ~~the replicable genetic package is a phage and~~ the plurality of compounds are attached to different coat proteins having different sequences, and each of the different coat proteins bears one or more of the compounds.

24. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 23, wherein the plurality of compounds are the same.

25. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 24, wherein at least some of the plurality of compounds are different.

26. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein ~~the replicable genetic package is a phage and~~ the plurality of compounds are attached to a plurality of coat proteins having the same sequence, and each of the plurality of coat proteins bears one or more of the compounds.

27. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 26, wherein the plurality of compounds are the same.

28. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 26, wherein at least some of the plurality of compounds are different.

29. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein the plurality of compounds are attached to a single coat protein.

30. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein ~~the replicable genetic package is a phage and~~ bacteriophage bears a plurality of exogenous attachment sites of the same type on a single coat protein or a plurality of coat proteins of the same sequence such that each of the coat proteins bear one or more of the attachment sites, and the plurality of compounds are associated with the ~~replicable genetic package~~ bacteriophage via the attachment sites.

31. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein the ~~replicable genetic package~~ bacteriophage is a phage and bears a plurality of exogenous attachment sites of the same type on a plurality of coat proteins having different sequences such that each of the coat proteins bear one or more of the attachment sites, and the plurality of compounds are associated with the ~~replicable genetic package~~ bacteriophage via the attachment sites.

32. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, wherein the ~~replicable genetic package is a phage and~~ bacteriophage bears a plurality of exogenous attachment sites of different types on a single coat protein or a plurality of coat proteins of the same sequence such that each of the coat proteins bear one or more of the attachment sites, and the plurality of compounds are associated with the bacteriophage ~~replicable genetic package~~ via the attachment sites.

33. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 22, ~~wherein the replicable genetic package is a phage and~~ the bacteriophage bears a plurality of exogenous attachment sites of different types on a plurality of coat proteins having different sequences such that each of the coat proteins bear one or more of the attachment sites, and the plurality of compounds are associated with the ~~replicable genetic package~~ bacteriophage via the attachment sites.

34. (Canceled)

35. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the heterologous nucleic acid tag encodes the identity of the compound.

36. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein the heterologous nucleic acid tag encodes a value or symbol assigned to the compound.

37. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 1, wherein

~~(a) the bacteriophage is a phage; and~~

~~(b)~~ the heterologous nucleic acid tag is inserted into a segment of the genome of the ~~phage~~ bacteriophage such that it is flanked by a heterologous promoter and a heterologous restriction site, the heterologous promoter being in operable linkage with the heterologous nucleic acid tag.

38. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 37, wherein the heterologous promoter is selected from the group consisting of a phage T7 promoter, a T3 promoter and a sp6 promoter.

39. (Canceled)

40. (Currently amended) The ~~replicable genetic package~~ collection of bacteriophage of claim 127 ~~39~~, wherein each of the heterologous nucleic acid tags from the different ~~replicable genetic package~~ bacteriophage are isothermal tags.

41. (Cancel)

42. (Currently amended) The ~~replicable genetic package~~ collection of bacteriophage of claim ~~39~~ 127, wherein each ~~replicable genetic package~~ bacteriophage bears a different compound from a combinatorial library of small molecules.

43. (Withdrawn and currently amended) The collection of ~~replicable genetic package~~ bacteriophage of claim ~~39~~ 127, wherein at least a plurality of the ~~replicable genetic packages~~ bacteriophages are directly attached to the compound by a covalent bond formed from an endogenous functional group on the ~~replicable genetic package~~ bacteriophage and a functional group borne by the compound.

44. (Currently amended) The ~~replicable genetic package~~ collection of bacteriophage of claim ~~39~~ 127, wherein at least a plurality of the ~~replicable genetic package~~ bacteriophage s are attached to the compound via one or more linkers.

45. (Currently amended) A ~~replicable genetic package~~ bacteriophage displaying a compound other than an expressed polypeptide, wherein the ~~replicable genetic package~~ bacteriophage and the compound are attached via a linker, and the heterologous nucleic acid tag is a nucleic acid segment other than a segment that encodes for a polypeptide displayed on the bacteriophage.

46. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the ~~replicable genetic package~~ bacteriophage is a collection of ~~replicable genetic packages~~ bacteriophages, each ~~replicable genetic package~~ bacteriophage in the collection bearing a different compound.

47. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the compound is a small molecule.

48. (Cancel)

49. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the linker is a package linker attached to the ~~replicable genetic package~~ bacteriophage and the compound is attached to the ~~replicable genetic package~~ bacteriophage via the package linker.

50. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the linker is a compound linker borne by the compound and the ~~replicable genetic package~~ bacteriophage is attached to the compound via the compound linker.

51. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the linker is a package linker borne by the ~~replicable genetic package~~ bacteriophage, and the compound bears a compound linker and the compound is attached to the bacteriophage ~~replicable genetic package~~ by association of the package and compound linkers.

52. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 51, wherein the ~~replicable genetic package~~ bacteriophages and the compound are attached via a non-covalent interaction between package and compound linkers.

53. (Withdrawn and currently amended) The ~~replicable genetic package~~ bacteriophage of claim 51, wherein the ~~replicable genetic package~~ bacteriophage and the compound are attached via a covalent bond formed between package and compound linkers.

54. (Currently amended) The ~~replicable genetic package~~ bacteriophage of claim 45, wherein the ~~replicable genetic package~~ bacteriophage displays a plurality of compounds.

55.-106 (Canceled)

107-126. (Canceled)

127. (Currently Amended) A collection of ~~replicable genetic packages~~ bacteriophages, each displaying a compound other than a polypeptide expressed by the ~~replicable genetic package~~ bacteriophage and comprising a heterologous nucleic acid tag that can be decoded to identify a characteristic of the compound, and the heterologous nucleic acid tag is a nucleic acid segment other than a segment that encodes for a polypeptide displayed on the bacteriophage, and wherein at least some of the ~~replicable genetic packages~~ bacteriophages display different compounds and ~~replicable genetic packages~~ bacteriophages displaying different compounds harbor different tags.